1st Armored Division

Hazard Communications Program

Wiesbaden, AAF

Subpart - Z

Toxic & Hazardous Substances

HAZCOM (29CFR1910.1200)

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Hazard Communication Training (Right-to-know) 29 CFR 1910.1200

CHEMICALS

Chemicals are a part of our lives. Modern life as we know it would be impossible without chemicals. Plastics, drugs, and cleaning products are just a part of our daily lives dependent on chemicals. But to be beneficial we must treat them with respect. Without proper handling, *injury* or *serious* illness can result.

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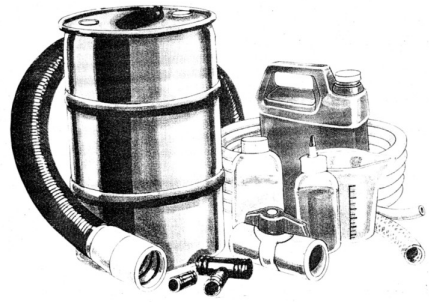
Examples

of everyday chemicals important to all of us:

JP8
Anti Freeze
Aircraft Adhesives
Petroleums, Oils & Lubricants
Toxic or Flammable solvents
Corrosive materials



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FACTOID

Approximately one-fourth of the U.S. workforce is exposed to one or more chemical hazards. Exposure to these hazards may cause or contribute to many serious health effects.

"The Occupational Safety and Health Administration has issued a rule (standard) - the Hazards Communication Standard - that is designed to assure employee safety while working with hazardous chemicals. It says you have a "Right to Know" what chemical hazards

Five Areas of Focus for the HAZCOM Standard

- **Hazard evaluation (Identifying hazardous chemicals)**
- **Employee Training**
- **Product/Container Labeling**
- **Material Safety Data Sheets (MSDSs)**
- **A Written Hazard Communication Program**

WHO IS OSHA

Occupational Safety and Health Administration (*OSHA*)

December 29, 1970

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HAZARDS EVALUATION

What is a Hazardous Chemical?

Any Chemical whose presence or use is a *physical* hazard or *health* hazard

Physical hazard or a Health hazard?

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HAZARDS EVALUATION

Types of Hazards

Physical Hazards - can produce a dangerous situation outside the body.

Health Hazards - Can produce health damage

Acute: **Health hazards which do their damage rapidly from short term exposure.**

Chronic: **Health hazards which affect the body slowly through long-term exposure.**

Physical hazard or a Health hazard?

HAZARDS

Samples of Hazardous Chemicals by physical or health classification:

PHYSICAL

- Combustible Liquids
- Compressed Gases
- Explosives
- Flammable Aerosols
- Flammable Gases
- Flammable Liquids
- Flammable Solids
- Organic Peroxides
- Oxidizers
- Pyrophorics
- Unstable Reactive
- Water Reactive

HEALTH

- Carcinogens
- Toxic Agents
- Highly Toxic Agents
- Reproductive Toxins
- Irritants
- Corrosives
- Sensitizers
- Hepatoxins
- Nephrotoxins
- Hematopoietic System Toxins
  - Damage Lungs
  - Damage Skin
  - Damage Eyes, Mucous Membranes

EMPLOYEE TRAINING

Under the Hazards Communications Standard, (*29 CFR 1910.1200*) effective May 23, 1988 each employer is required to inform and train their employees at the time of their assignment to a work area where hazardous chemicals are present and whenever a

Semi - Annually

EMPLOYEE TRAINING

How do you detect the release of hazardous chemicals?

Smell, sight, effects on you or a co-worker, monitoring device?

???

EMPLOYEE TRAINING

Types of personal protective devices:

- Eye protection
- Respirators
- Gloves
- Chemical Protective Clothing

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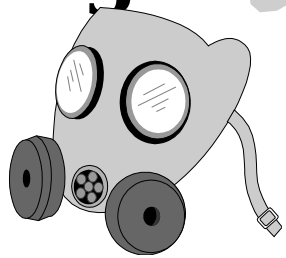

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EMPLOYEE TRAINING

Methods of Controlling Workplace Exp

- ***Engineering Controls*:**
  Changes in machinery, plant layout, work operation.
- ***Administrative Controls:***
  Housekeeping, safe work practices, medical monitoring, shortened shifts.
- ***Personal Protective Equipment:***
  Safety glasses, face shields,

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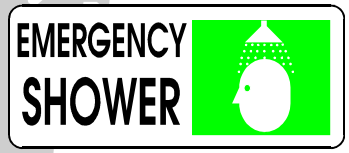
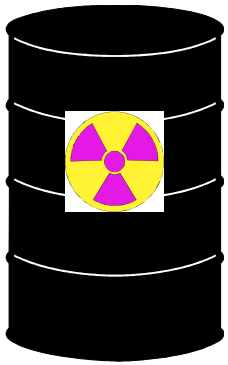
SIGNAGE/PLACARDING/LABELING



OSHA 29 CFR 144/



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Standard Placards

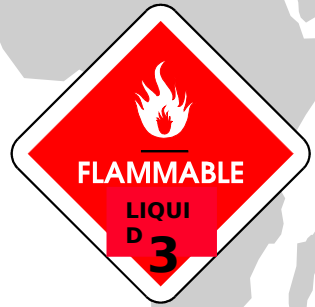
Bulk
Transport
Shipment
Containers

Explosives

1.1
1.2
1.3
1.4 7.62 or M60 Ammo
1.5
1.6

Gases

2.1 Flammable
2.2 Non-Flammable
2.3 Poison



Flammable Liquids

Flammable ≤ 141° F
vs
Combustible ≥ 141°F ≤ 200° F

Flammable Solids

4.1 Flammable Solids
4.2 Spontaneously
4.3 Dangerous W/Wet

DOT
49 CFR

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Standard Placards

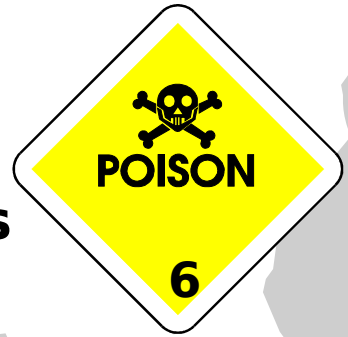
Bulk
Transport
Shipment
Containers

Oxidizing

5.1 Oxidizers
5.2 Organic Peroxides

Poisonous

6.1 Materials
6.2 Etiologic



Corrosives

Class 9
Miscellaneous
Hazardous Materials

Radioactive

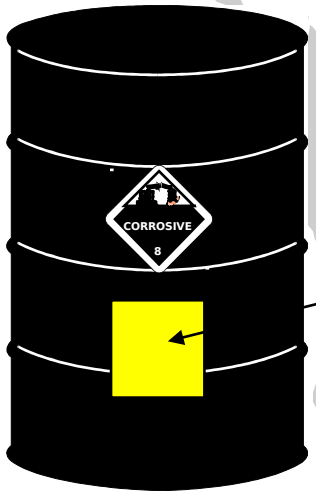
DOT
49 CFR

49 CFR Section 172.556

Environmental Labeling

Federal Agency

EPA
40 CFR



HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERATOR INFORMATION:
NAME
ADDRESS PHONE
CITY STATE ZIP
EPA MANIFEST
ID NO. DOCUMENT NO. /
ACCUMULATION EPA
START DATE WASTE NO.

DOT PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE

Normally Placed On Containers by Environmental Division Personn

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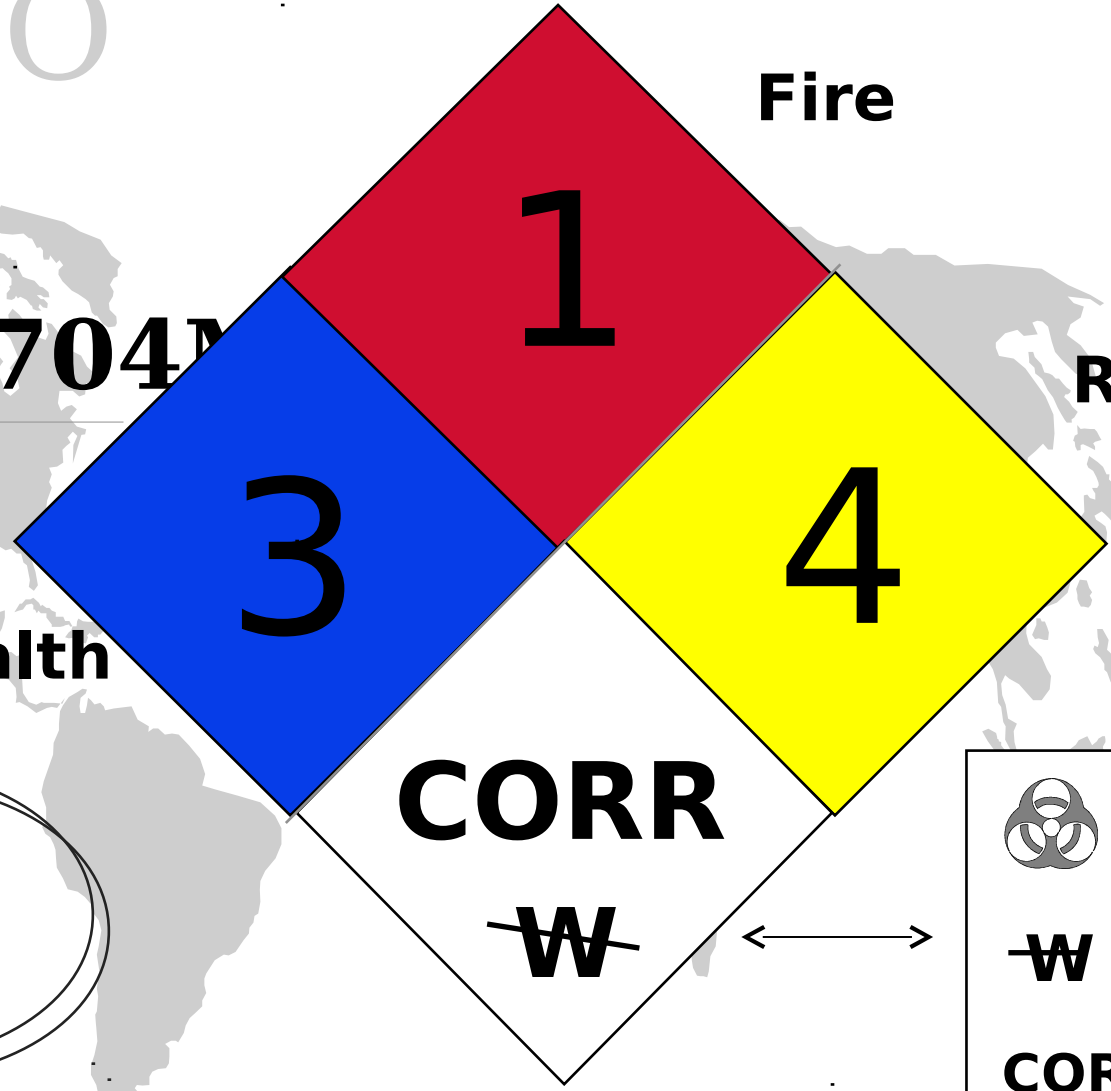
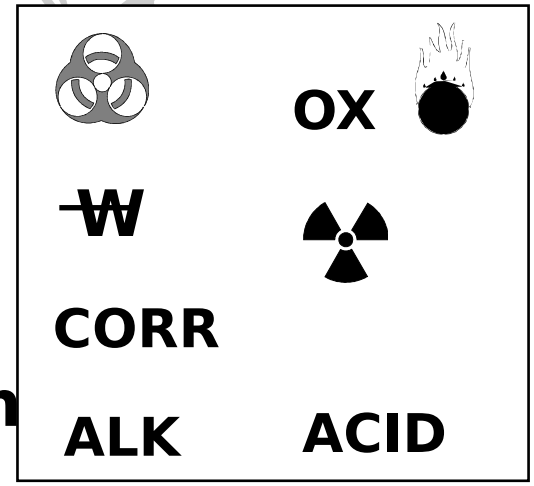
NFPA Form 704M



Scale

0 - 4



Special Information

National Fire Protection Association

PRODUCT LABELING

1. Common name of the chemica
2. Name, address, and emergenc
3. Signal word

   Danger, Warning, Caution.
4. Principal hazards

   Physical Vs Health.
5. Precautionary statement.
6. First-aid instructions.
7. Proper handling & storage
8. Special instructions

   (***children***)

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PRODUCT LABELING

1. Common name of the chemical.
2. Name, address, and emergency ph #'s.
   WORK
3. Signal word
   Danger, Warning, Cau
4. Principal hazards
   Physical Vs Health.
5. Precautionary statemen
6. First-aid instructions.
7. Proper handling & stora
8. Special instructions

PRODUCT LABELING

Primary Vs Secondary Containers

Label, tag, or mark containers into which hazardous chemicals are transferred with the chemical identity and hazardous markings.

HMIG

Hazardous Materials Identification Guide

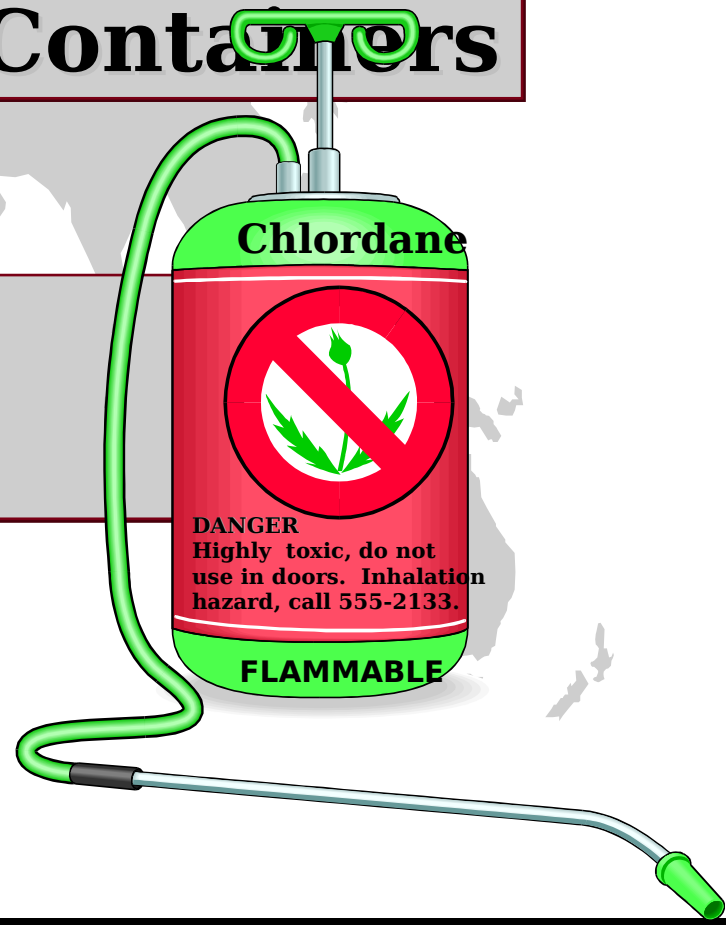
PRODUCT LABELING

Primary Vs Secondary Containers

Portable Containers

Label portable containers when they are not for "*immediate*" use.

- **Not to exceed 1 shift**



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PRODUCT LABELING

Stationary Process Equipment

In lieu of labels, proces
sheets, batch tickets,
standard operating
procedures or other
written materials may
used on stationary
process equipment if
they contain the same
information as a label
and are readily availab
to employees in the wo
area or station.

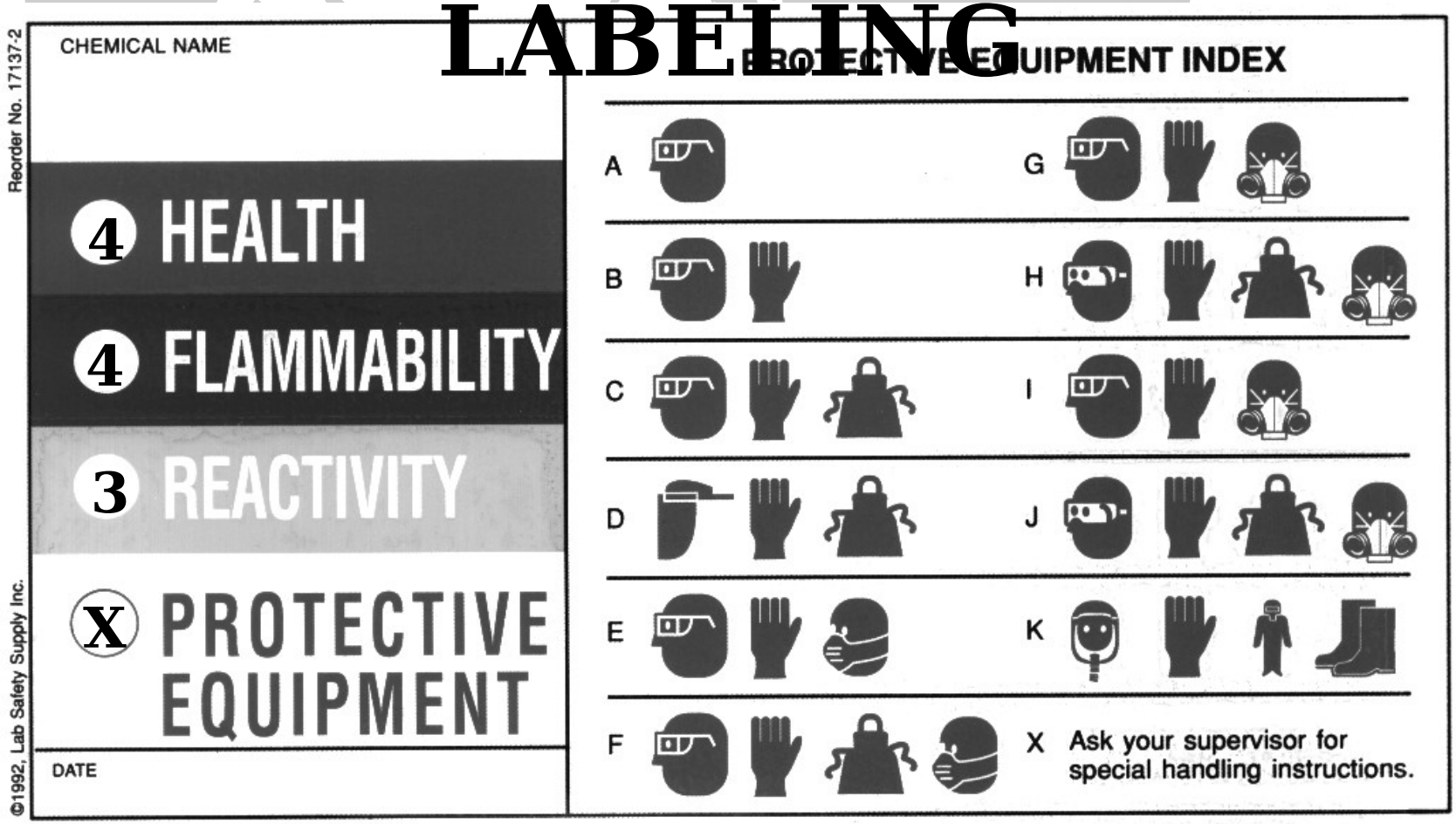
PRODUCT LABELING

HEALTH	4
FLAMMABILITY	4
REACTIVITY	3
PERSONAL PROTECTION	X

HMIS

Hazardous Materials Identification Syst

PRODUCT LABELING



HMIS

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PRODUCT LABELING

Chemical Identifiers

Cross reference chemical identifiers on labels to MSDSs and the lists of hazardous chemicals.

100 % Accountability

Inventory

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PRODUCT LABELING

Chemical Awareness

**Be sure to do *YOUR* part in us
this information effectively:**

- ***Read*** - **the label on the cont
of every chemical yo**
- ***Check*** - **the MSDS whenever
need more information ab
how to control the material's
hazards.**
- ***Follow*** - **the instructions the label
provid**

Never Mix Chemicals!!! **Methyl Ethyl Death**

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MATERIAL SAFETY DATA SHEETS

MSDS

Provides the employer and the employee with detailed information about the hazards of specific chemicals and how to control them. MSDSs must accompany or precede the shipment of hazardous chemicals.

Manufacturers

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MATERIAL SAFETY DATA SHEETS

Key Terminology

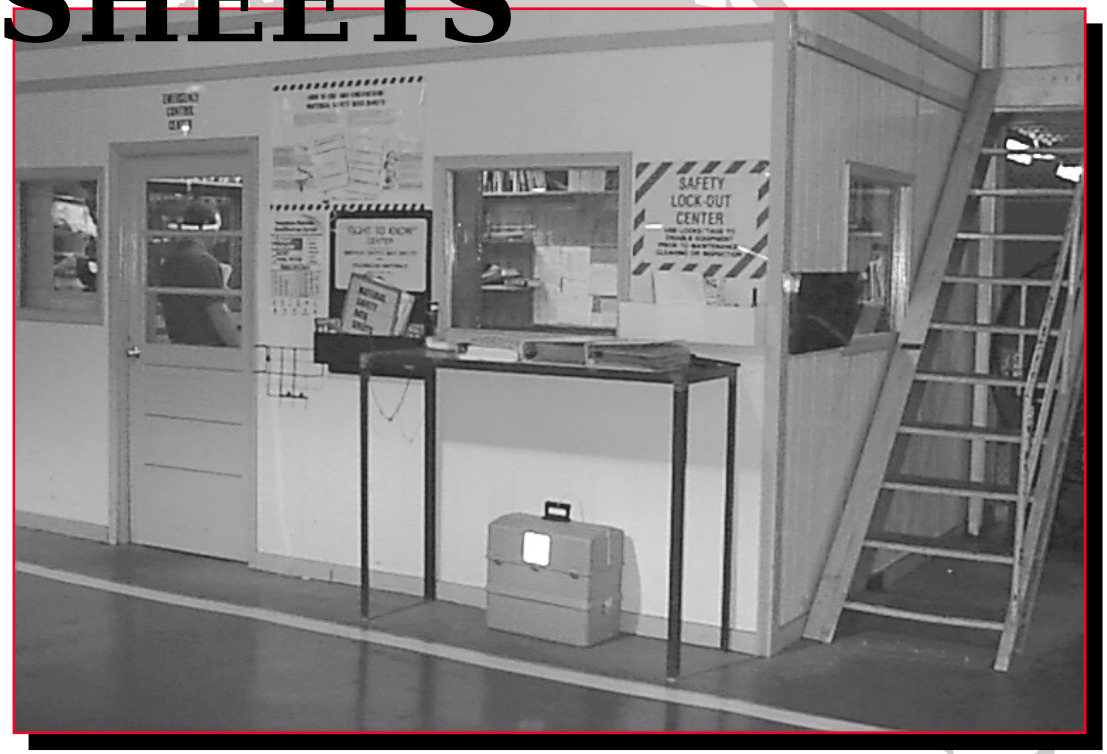
Caution MSDS PEL Flashpoint

Warning Acute Chronic Fume

Danger Mist Vapor pH

MATERIAL SAFETY DATA SHEETS

Employers must have an MSDS for *each* chemical used in the workplace. The MSDS must be *available* to workers in the area where each hazardous chemical is used.



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MATERIAL SAFETY DATA SHEETS

MSDS

OSHA specifies the information to be included in each MSDS, but *does not* as of yet prescribe the format.

The MSDS must be in English and include at least the following:

MATERIAL SAFETY DATA SHEETS

MSDS

Section 1
Manufacturer's Information

Section 2
Hazardous Ingredients

Section 3
Physical & Chemical Characteristics

Section 4
Fire & Explosion Data

Section 5
Physical Hazards

Section 6
Health Hazards

Section 7
Special Precautions and Leak Procedures

Section 8
Special Protection Information and Control Measures

MATERIAL SAFETY DATA SHEETS

MSDS

Section 1
Manufacturer's Informati

- **Manufacturer's Name**
- **Address**
- **Date prepared**
- **Emergency telephone number**
- **Telephone number for informat**
- **Signature of preparer**

MATERIAL SAFETY DATA SHEETS

MSDS

Section 2
Hazardous Ingredients

- **Hazard components**
- **Exposure limit**
- **ACGIH TLV**
- **Identity information**
- **Other limits recommended**
- **% (optional)**

MATERIAL SAFETY DATA SHEETS

MSDS

Section 3
Physical Chemical Characteri

- **Boiling point**
- **Vapor pressure**
- **Vapor density**
- **Solubility in water**
- **Appearance and odor**
- **Specific gravity**
- **Melting point**
- **Evaporation rate**

MATERIAL SAFETY DATA SHEETS

MSDS

Section 4
Fire and Explosion Hazar

- **Flash point**
- **Flammable limits**
- **LEL**
- **UEL**
- **Extinguishing media**
- **Special fire fighting procedures**
- **Unusual fire and exposure haza**

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MATERIAL SAFETY DATA SHEETS

MSDS

Section 5
Reactivity Data

- **Stability**
- **Conditions to avoid**
- **Incompatibility**
- **Hazardous decomposition and byproducts**
- **Hazardous polymerization**

MATERIAL SAFETY DATA SHEETS

MSDS

Section 6
Health Hazard Data

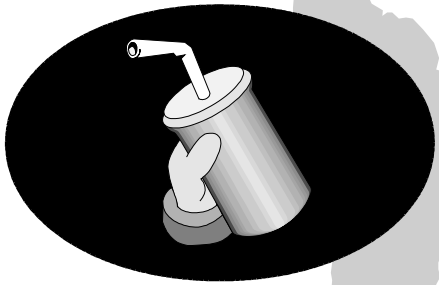
- **Routes of entry**
- **Carcinogenicity**
- **Signs and symptoms**
- **Health hazards (acute/chronic**
- **IARC Monographs**
- **OSHA-regulated**
- **Medical conditions generally aggravated by exposure**

MATERIAL SAFETY DATA SHEETS

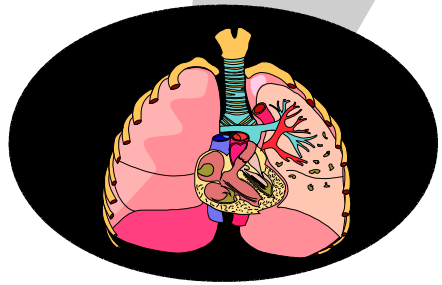
MSDS

Section 6

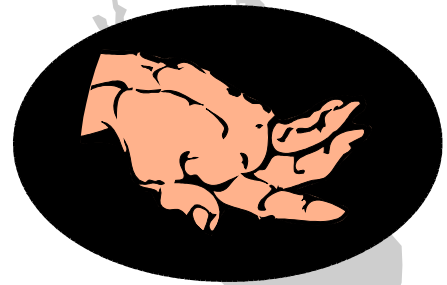
Routes of Entry



INGESTION



INHALATION



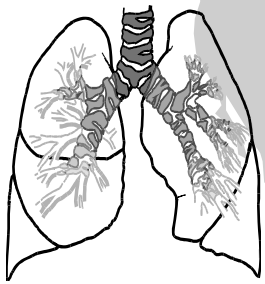
SKIN ABSORPTION

Injection Hazard

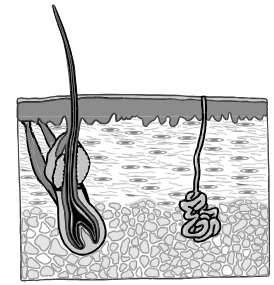
Temperature Driven

MATERIAL SAFETY DATA SHEETS

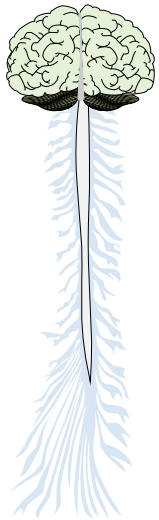
MSDS



CHEMICAL EFFECTS ON THE BODY ARE DEPENDENT ON

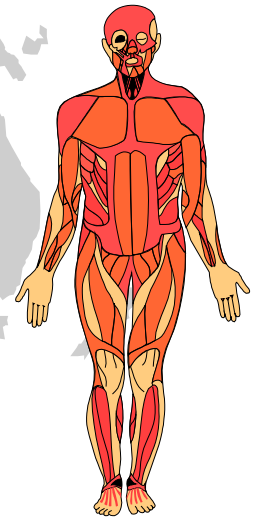


TOXICITY OF CHEMICAL



CONCENTRATION OF CHEMICAL

DURATION OF EXPOSURE



INDIVIDUAL SUSCEPTIBILITY

MODE OF ENTRY

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MATERIAL SAFETY DATA SHEETS

MSDS

Section 7
Precautions for Safe Handlin

- **Steps to be taken in**
- **Precautions to be taken in handling and storage**
- **Other precautions**

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MATERIAL SAFETY DATA SHEETS

MSDS

Section 8
Control Measures

- **Respiratory protection**
- **Ventilation**
- **Protective gloves**
- **Eye protection**
- **Other protective clothing or equipment**
- **Work/hygienic practices**

Program Content:

WRITTEN HAZARD COMMUNICATION

List of hazardous chemicals in each work area.

Provisions for container labeling.

Means for collecting and availability of the MSDSs.

Means the employer will use to inform employees of the hazard of non-routine task.

Employee written training program.

Hazards associated with chemicals in unlabeled pipes.

Multi-employer documentation.

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HAZARD COMMUNICATION TRAINING

The HAZCOM law means you have the *"Right-to-Know"* about chemical hazards in the workplace - your workplace!

THINGS TO REMEMBER

Your HAZCOM Program is only as effective

- ✓ **Read labels and MSDSs.**
- ✓ **Know where to find informati about your chemicals.**
- ✓ **Follow warnings and instructions.**
- ✓ **Use the correct protective clothing and equipment.**
- ✓ **Learn the emergency procedures.**
- ✓ **Practice sensible, safe work habits.**

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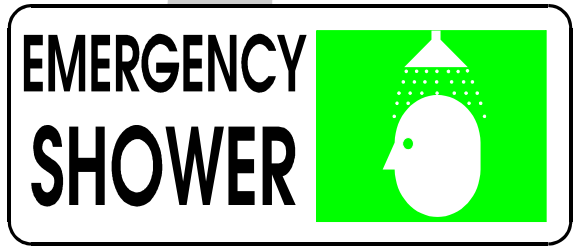
Chemicals - are not to be taken lightly

When in doubt, ask your supervisor!



29 CFR 1910.151(c)

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QUESTIONS MOST COMMONLY ASKED REGARDING HAZCOM

- What is the Hazard Communication training about?
- What hazardous chemicals are you exposed to routin
  - what chemicals may you be exposed to in a foreseeable emergency?
- Where are these chemicals present?
- What are the short term and long term effects of thes chemicals on the body?
- How can you detect if you are overexposed to the che
- How can you protect yourself from overexposure?
- Where are the written program and MSDSs kept?

HAZCOM GUIDANCE

- OSHA Title 29 Code of Federal Regulations 1910.1200
- Title 29, CFR, Part 1960, Basic Program Elements for Federal Employee Occupational Safety and Health
- **Executive Order 12196**
- **DODI 6050.5** -- Hazard Communication Program (DOD Hazard Communication Program) is the official written HAZCOM program.
- DA Memo 385-3
- AR 600-8-104 (Military Personnel Information, Management/Records) - mandates use of DD Form 1556 to document HAZCOM training for military personnel (table 2-1).
- USAREUR 385-10, Implementation of Hazard Communication Standard

HAZCOM RESOURSES

- The Federal Hazard Communication Training Program, DA Video 505215, TVT 20-827. Available from your local TSC or 1AD Safety & Occupational Health Office. DSN 337-4835
- **HMIRS** -- Hazardous Materials Information Resource System
- **OSHA HAZCOM Training Guidance**

- Additional information can be obtained from the 1AD Safety & Occupational Health Office DSN 337-4835 and/or your BCT Safety Professional

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Any Questions Regarding *YOUR* HAZCOM Training?

Contact your BDE/Division Safety Office